



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

Ms. Christina Purcell
Case Manager
New Jersey Department of
Environmental Protection and Energy
401 East State Street
Trenton, New Jersey 08625

Dear Ms. Purcell:

Enclosed you will find the United States Environmental Protection Agency's comments on the Remedial Investigation and Feasibility Study Work Plan, the Field Sampling Work Plan, and the Health and Safety Plan for the Ventron Velsicol Superfund Site located in Wood-Ridge/Carlstadt, New Jersey.

Should you have any questions regarding these comments I may be contacted at (212) 264-9836.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Rich Puvogel".

Rich Puvogel
Remedial Project Manager
Northern New Jersey Superfund Branch II

enc.



WORK PLAN

Page 1, Section 1.0, Last Sentence and Figure 1.1

The last sentence of Section 1.0 of the work plan states that the site is illustrated on Figure 1.1. On page 1 of Velsicol/Morton responses to NJDEPE comments, Velsicol/Morton states that the purpose of the boundaries shown on the map are to present the extent of the study areas for the RI/FS. This statement is not consistent with the statement in the last sentence in section 1.0 and the last sentence in Section 1.4.2 of the work plan. To provide the reader with a better understanding of where the property boundaries of the site and the study area boundaries are located, present a map depicting the boundaries of the Ventron/Velsicol property and the boundaries of the study area. An explanation of the two different boundaries appearing on the map should be provided in section 1.0 of the work plan.

In the Velsicol/Morton response to NJDEPE comment #2, Velsicol/Morton state that the purpose of the boundaries shown on Figure 1.1 are to present the extent of the study areas for the RI/FS. In the Velsicol/Morton response to NJDEPE comment #1, Velsicol/Morton state that additional characterization of off-Site contamination will be completed under the Wood-Ridge Site RI/FS on the Reno property and POTW property, and adjacent lands surrounding these two off-Site properties. The boundary line on the map in Figure 1.1 does not encompass the Reno or POTW or any adjacent property that are considered additional study areas. When revising the map as per the first paragraph of this comment, revise the map to also show the boundary of the study area which the text states will include the Reno, POTW and adjacent property.

Section 1.0 of the work plan identifies Conestoga-Rovers and Associates Limited as the party who prepared the RI/FS Work Plan on behalf of Velsicol Chemical Corporation and Morton International Inc., but does not provide adequate background information on the site. This Section should also provide a general explanation of the reasons for the RI/FS; the expected results or goals of the RI/FS should also be presented.

Page 22, Top of Page

The phrase, "adjacent to the soil" should be changed to "adjacent to the Velsicol Site".

Page 22, 1.4.2 Site Description

Existing data should be used to develop a site description for the work plan which can also be used in the RI report. This site description should include location, ownership, topography, geology, land use, waste type, estimates of waste volume, a chronology of significant events such as chemical storage and disposal practices, sampling events, regulatory violations, legal actions and changes in ownership and information concerning previous cleanup activities. In addition, the information crossed out on page 24 of the work plan which was to be included in the site description should also be included.

Page 31, Paragraph a., Third Sentence

This sentence mentions Never Touch Creek and Moonachie Avenue and then refers the reader to Figure 1.1. These two features are not on the map in Figure 1.1. The map needs to be revised to provide for the features referenced in the text of the work plan.

Page 31, Struckout Section b. (Fate and Transport)

A fate and transport analysis must be conducted to predict the potential for human exposures to chemicals identified at the site. Fate refers to all physical, chemical, or biological processes acting on a contaminant to cause its release, reduce its mass, remove it from the transport media, or retard its movement through the environment. Fate processes effect the rate of transport and the concentration appearing at a point after transport has occurred. An evaluation of fate involves an assessment of the persistence, mobility and chemistry of the contaminant in relation to the site specific environmental conditions. Transport involves the movement of contaminants through fluid media. Whether the transport medium is air, surface water, or groundwater, an assessment of transport first considers the direction and magnitude of flow. If the direction and rate of flow are known, the probable rate and migration route for contamination is known. Considered together, fate and transport analysis allows the determination of whether contaminant exposures are possible and, if so, what concentrations may be expected. The assessment of fate and transport of contaminants should be a qualitative evaluation to determine which media exposures to contaminants may occur. The results of this assessment are then to be used in the risk assessment to quantitatively determine complete exposure pathways, concentrations, and assess risk.

Page 35 and 36, Near-Surface Soils and Subsurface Soil Testing

TCLP testing should be performed on contaminated media using screening techniques to identify the most highly contaminated samples. Contaminated media exceeding RCRA toxicity characteristic levels must be managed as hazardous waste.

Page 35, Paragraph 2; and Appendix A (SAMP), Page A-3 Bottom of Page

The locations of the soil samples should be surveyed. The location of these sample points may be necessary when performing the Phase II surface soil sampling program.

Page 39, Section A, Objectives

Seven objectives were given for the hydrogeologic investigation, yet several of them can not be met with the existing hydrogeologic investigation workplan.

Objectives 1 and 2, which are to determine the site geology and stratigraphy can not be adequately met with the existing plan. The geology is planned to be characterized using only the samples collected by the NJDEPE in 1990. There is concern that these samples are three years old and some of the properties of the geologic material may have changed, i.e. compaction and color. In addition, the deepest existing well on site is 19 ft. This is not deep enough to create a geologic and hydrogeologic profile. At least 2 intermediate depth borings should be drilled (approximately 60 ft depth) and one additional boring should be drilled down to the reddish brown silty sand above the Brunswick Formation. This will provide information on the site at depth, as well as, more recent geologic samples for the cross-sections.

Objectives 3 and 5 are to define the groundwater flow system including vertical gradients and vertical contamination. These can not be adequately met with the existing monitoring well network. MW-1 and MW-1A are screened over the same interval. The same is true for MW-4 and MW-4A, as well as, MW-12 and MW-12A. Additional wells are needed, especially adjacent to Berry's Creek, to adequately define the vertical gradients and vertical contamination extent.

Objective 4 can be adequately met with the existing workplan, however, the additional wells (proposed above) should be measured as part of the tidal influence study. These additional wells will provide information on the identified flow system and Berry's Creek including the potential for flow reversal due to tidal effects.

Additional information is needed on how objectives 6 and 7 will be achieved. In particular, what will be done to determine

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potential receptors of contaminated groundwater?

Page 43, Paragraph 1

All the shallow wells appear to be screened across the water-table, therefore, only rising head slug tests can be performed accurately on them. If falling head tests are done the effect of the unsaturated zone will be included. See comment below.

Page 43, Paragraph 1; and Page A-12(SAMP), Bottom of Page

Aquifer tests are preferred to slug tests because of the higher quality data. Slug tests are often not useful in characterizing the bulk hydraulic properties of an aquifer. Aquifer tests should be performed rather than slug tests.

Pages 44 and 46, Surface Water Analysis

Additional parameters for surface water should include organic mercury and hardness, as organic mercury is a bioavailable form of the that contaminant and hardness affects the toxicity of many inorganic contaminants.

Pages 45 and 47, Sediment Analysis

Additional parameters for sediments should include total organic carbon (TOC) and grain size distribution, which are both parameters influencing a contaminant's bioavailability.

Page 49, Paragraph 1

Provide a map showing the general location of the portion of the Site where the leachate/seep samples will be taken.

Page 50, Section 2.5,B

The air investigation should include the performance of an air pathway analysis. Once the concentration of each contaminant is known in the surface soils and subsurface souls, the emission rate of each should be estimated, then, concentration from the modeling should be used in performing the inhalation pathway of the risk assessment. The National Technical Guidance Study Series document entitled "Guideline for Predictive Baseline Emissions Estimation Procedure for Superfund Sites" should be

referred to when performing the air pathway analysis.

FIELD SAMPLING PLAN

Page A-9, A-10, and A-11

The evacuation of the well prior to sampling and groundwater sampling can not be done with a bailer. Bailers agitate and degas the water column to a greater degree than a low flow pump. A low flow bladder, helical submersible or impeller submersible pump should be used for both evacuation and sampling. A peristaltic pump is inappropriate for evacuation and sampling because of degassing due to negative pressure. If a diaphragm pump is to be used for evacuation and sampling, provide additional information on the pump. The flow rate should be decreased to 100ml/min while filling the sample bottles.

Page A-11, Paragraph 3

The rinsate blank should be taken through the flow pump, instead of the bailer.

Page A-12, Paragraph 1

The groundwater level measurement should not be recorded after well development. The aquifer must equilibrate before the measurement is recorded.

HEALTH AND SAFETY PLAN

Page C-5, Section 4.0, First Paragraph

An alternate Health and Safety Officer should be identified to act while the primary Health and Safety Officer is away from the site.

Page C-7

This page of the Health and Safety Workplan states that a Site-specific Health and Safety Plan(s) will be developed and executed by the selected subcontractor(s) for work performed during the field activities at the Site, and that the Site-specific plan will address, all the requirements outlined in this HASP. The use of this document as a guideline for the contractor(s) who will actually be completing the RI/FS site work to develop a site specific HASP is an inefficient approach. This HASP could be considered a site-specific HASP as it is only intended for use at the Ventron Velsicol Site. The future contractor(s) would then be able to simply provide task-specific risk analyses for the work they will be conducting at the site. Developing an entirely new HASP by each subcontractor may not be an efficient use of resources. Rather, the task-specific risk analyses and control measures can simply be included as amendments to this overall site-specific HASP. There should only be one HASP per site.

Page C-8, Section 6.0

The HASP should identify the nearest medical assistance.

Page C-11, Section 8.0

Note that there are chemical-specific medical surveillance requirements for employees who may be exposed to lead, cadmium and arsenic, (OSHA's 29 CFR 1910.1025, 1018, and 1027).

Page C-13, Section 9.0

The HASP should indicate that individuals functioning in a supervisory capacity have the requisite supervisory training in accordance with OSHA's CFR 1910.120(e)(4).

The HASP should indicate that at least one individual on-site is adequately trained to render first aid. This is required if there is no medical facility in close proximity to the site, as per OSHA's CFR 1910.151.

Page C-13, Section 9.0, First Paragraph, Third Sentence:

The report states that: "The site training session will be conducted by the HSO (or other qualified professional in the presence of the CIH) prior to beginning work at the site." These responsibilities should be detailed in Section 4.0.

Page C-16, Item 1

This item states that mersorb cartridges will be utilized when working in mercury contaminated areas. The mersorb cartridge does not meet OSHA requirements because it is not NIOSH/MSHA approved. Therefore it cannot be used in atmospheres having mercury vapor concentrations in excess of .05 mg/m³.

Page C-21

The action levels on page C-21 for mercury are not acceptable. As previously mentioned, the mersorb cartridges are not NIOSH/MSHA approved. Thus it is unacceptable to use them when mercury concentrations exceed .05mg/m³. If concentrations exceed the PEL supplied-air respirators must be used.

Organic vapor action levels are not in accordance with EPA's Standard Operation Safety Guides (SOSG). Section 6.9.3 of EPA's SOSG recommends Level B protection when concentrations of unknown airborne vapors exceed 5 ppm. Level C is considered acceptable if highly toxic substances have been ruled out, but ambient levels of vapor concentrations less than 5 ppm persist.